

REMARKS/ARGUMENTS

Claims 141 – 159 remain in this application.

Claims 141, 145, 148 – 152, 153, 154, 156, 158 have been amended.

Claims 160 – 163 have been canceled.

Claim 141 has been amended for the following reason:

To clarify differences between the current invention and prior art.

To clarify the meaning of “input parameters”.

To clarify the meaning of “variable format”.

Claim 145 has been amended for the following reason:

To clarify the meaning of “substitution”.

Claim 148 has been amended for the following reason:

To clarify the meaning of “reduced”.

Claim 149 has been amended for the following reason:

To clarify the meaning of “reduced”.

Claim 150 has been amended for the following reason:

To clarify the meaning of “substitution”.

Claim 151 has been amended for the following reason:

To clarify the meaning of “nested”.

Claim 152 has been amended for the following reason:

To clarify the meaning of “dynamic DOM tree matching”.

To clarify the meaning of “dynamic tag string matching”.

Appl. No. 09/553,669
Amdt. Dated February 10, 2004
Reply to Office action of January 23, 2004

Claim 153 has been amended for the following reason:
To clarify the meaning of "invariant reference data".

Claim 154 has been amended for the following reasons:
To comply with 35 U.S.C.112.

Claims 156 has been amended for the following reason:
To clarify differences between the current invention and prior art.
To clarify the meaning of "input parameters".
To clarify the meaning of "variable format".

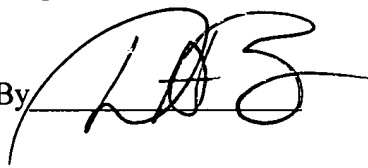
Claim 158 has been amended for the following reason:
To clarify the meaning of "graphically highlighting and isolating".

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "**Version with markings to show changes made**".

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

By

A handwritten signature in black ink, appearing to be "DAB", written over a horizontal line.

Dennis A. Brittain Ph.D.
Tel.: (858) 541-2556

Version with markings to show changes made

In the Claims:

Claim 141 has been amended as follows:

141. (Amended): A method for specifying, capturing, locating, extracting and storing data from a network, comprising: specifying at least one target datum accessible from a network location addressable by a network address; generating one or more sets of input parameters, wherein said "input parameters" normally refers to hypertext markup language (HTML) or extensible markup language (XML) <INPUT> elements and <FORM method="get"> or <FORM method="post"> elements, or to variables within <SCRIPT> elements, allowing capture of one or more sets of network data from said network location; capturing ~~said~~ one or more sets of said network data from said network location at specified dates and times; locating ~~said~~ at least one said target datum in variable format ~~said~~ sets of said network data, wherein said "variable format" normally refers to possible insertions or deletions of HTML or XML elements as well as variable text strings; extracting ~~said~~ at least one said target datum from said variable format ~~said~~ sets of said network data; and storing ~~said~~ at least one said target datum in a file, a database, or any storage medium.

Claim 145 has been amended as follows:

145. (Amended) The method of claim 141, wherein said specifying at least one target datum further comprises setting up to perform substitution of said input parameters, wherein said "substitution" normally refers to the creation of sets of values for <INPUT> elements or <SCRIPT> variables, wherein said setting up to perform said substitution of said input parameters includes: parsing URL strings to locate and identify said input parameter names and types; locating and extracting <INPUT> elements from HTML or XML data; specifying said

input parameter types and said input parameter values; and storing the specifications of said input parameters in a file, a database, or any storage medium.

Claim 148 has been amended as follows:

148. (Amended) The method of claim 141, wherein said specifying at least one target datum further comprises setting up to perform dynamic document object model (DOM) tree matching, wherein said setting up to setting up to perform dynamic ~~document object model~~ DOM tree matching includes: capturing ~~said~~ one or more sets of said network data from a said network location; extracting ~~hypertext markup language (HTML)~~ or ~~extensible markup language (XML)~~ elements from said network data; generating a reduced ~~document object model~~ DOM template of said network data using extracted HTML or XML elements, wherein said “reduced” normally refers to the removal text strings or other data contained within said network data that may change each time said network data is captured from said network location; and storing said reduced ~~document object model~~ DOM template in a file, a database, or any storage medium.

Claim 149 has been amended as follows:

149. (Amended) The method of claim 141, wherein said specifying at least one target datum further comprises setting up to perform dynamic tag string matching, wherein said setting up to perform dynamic tag string matching includes: capturing ~~said~~ one or more sets of said network data from a said network location; extracting ~~hypertext markup language (HTML)~~ or ~~extensible markup language (XML)~~ elements from said network data; generating a reduced tag string template of ~~the~~ said network data using extracted HTML or XML elements, wherein said “reduced” normally refers to the removal text strings or other data contained within said network data that may change each time said network data is captured from said network location; and storing said reduced tag string template in a file, a database, or any storage medium.

Claim 150 has been amended as follows:

150. (Amended) The method of claim 141, wherein said capturing from said network location further comprises performing ~~parameter substitution~~ said substitution of said input parameters to generate one or more sets of said input parameters; repeatedly capturing from said network location for ~~each of said one or more sets~~ each set of said input parameters, where ~~said each of one or more sets~~ each set of said input parameters provides different target data from said network location.

Claim 151 has been amended as follows:

151. (Amended) The method of claim 150, wherein said performing ~~parameter substitution~~ said substitution of said input parameters further comprises said substitution of one or more nested said input parameters, wherein said “nested” has a similar meaning as in “nested FOR loops” such that variables within inner FOR loops run through their entire range of values for every value of a variable in an outer FOR loop, wherein said substitution of ~~said~~ one or more said nested said input parameters includes generating one or more sets of said input parameters, where ~~said~~ each of one or more sets of said input parameters provides different target data from said network location.

Claim 152 has been amended as follows:

152. (Amended) The method of claim 141, wherein said at least one target datum is extracted from said variable format said network ~~hypertext markup language (HTML) or extensible markup language (XML)~~ data using: character sequence bounding; or dynamic ~~document object model~~ DOM tree matching, wherein said dynamic DOM tree matching includes creating a said reduced DOM tree representation from said network data, comparing said reduced DOM tree representation with previously stored said reduced DOM tree template to identify most probable location within said network data of said target datum, and extracting said target datum from said

most probable location within said network data; or dynamic tag string matching, wherein said dynamic tag string matching includes creating a said reduced tag string representation from said network data, comparing said reduced tag string representation with previously stored said reduced tag string template to identify most probable location within said network data of said target datum, and extracting said target datum from said most probable location within said network data.

Claim 153 has been amended as follows:

153. (Amended) The method of claim 152, wherein said dynamic tag string matching or ~~said dynamic document-object model~~ DOM tree matching further comprises using invariant reference data to increase robustness of location and extraction of said at least one target datum, wherein said "invariant reference data" normally refers to text strings or other data contained within said network data that does not change each time said network data is captured from said network location.

Claim 154 has been amended as follows:

154. (Amended) The method of claim 141, wherein said extracting said at least one target datum further comprises: ~~performing color analysis of extracted image or graphical data to identify possible foreground pixels; performing connected component analysis, noise, line and blob removal to foreground pixels; generating possible text blocks from remaining foreground pixels~~ locating and extracting possible text blocks from unconstrained color images; performing character recognition on possible text blocks; filtering recognition results to remove invalid data from recognition of non-text pixels the recognized text; and storing the filtered text in a file, a database, or any storage medium.

Claim 156 has been amended as follows:

156. (Amended) A method for capturing and storing data from a network, comprising: specifying at least one target datum accessible from a page of an existing web browser; generating one or more sets of input parameters, wherein said "input parameters" normally refers to hypertext markup language (HTML) or extensible markup language (XML) <INPUT> elements and <FORM method="get"> or <FORM method="post"> elements, or to variables within <SCRIPT> elements; capturing page data from said page at specified dates and times; locating said at least one target datum in variable format said page data, wherein said "variable format" normally refers to possible insertions or deletions of HTML or XML elements as well as variable text strings; extracting said at least one target datum from said page data; and storing said at least one target datum extracted from said web browser page in a file, a database, or any storage medium.

Claim 158 has been amended as follows:

158. (Amended) The method of claim 156, wherein said specifying said at least one target datum includes graphically highlighting and isolating HTML or XML elements corresponding to said at least one target datum, wherein said "graphically highlighting and isolating" normally refers to selection of any of the HTML or XML elements contained within said page data, not just to hyperlinks or text strings which may be selected with ordinary web browsers, and said graphically highlighting and isolating HTML or XML elements includes using a mouse, joystick, trackball, or any pointing device.